

**What is claimed is:**

1. An isolated human RL5 polypeptide comprising a polypeptide having the amino acid sequence of SEQ ID NO: 2, its conservative variants, its active fragments, and its active derivatives.
- 5        2. The polypeptide of Claim 1 wherein the polypeptide is selected from the group consisting of:
  - (a) a polypeptide consisting of the amino acid sequence of 1-213 of SEQ ID NO: 2 or the amino acid sequence of 29-213 of SEQ ID NO: 2;
  - (b) the polypeptide having the function of binding to NKG2D and derived from the
- 10       polypeptide of (a) by substituting, deleting or adding one or more amino acid residues in the amino acid sequence of 1-213 of SEQ ID NO: 2 or the amino acid sequence of 29-213 of SEQ ID NO: 2.
3. An isolated polynucleotide comprising a nucleotide sequence sharing at least 70% homology to a nucleotide sequence selected from the group consisting of:
  - (a) a nucleotide sequence encoding the RL5 polypeptide defined in Claim 1;
  - 15       (b) the polynucleotide complementary to the nucleotide sequence of (a).
4. The polynucleotide of Claim 3 which encodes a polypeptide comprising the amino acid sequence of the amino acid sequence of 1-213 of SEQ ID NO: 2 or the amino acid sequence of 29-213 of SEQ ID NO: 2.
5. The polynucleotide of Claim 3 which is selected from the group consisting of
- 20       (a) the nucleotide sequence of 85-639 of SEQ ID NO: 1;  
          (b) the nucleotide sequence of 1-639 of SEQ ID NO: 1; and  
          (c) the nucleotide sequence of 1-720 of SEQ ID NO: 1.
6. A vector containing the polynucleotide of Claim 3.
7. A genetically engineered host cell comprising the vector of Claim 6.
- 25       8. A method for producing RL5 protein, which comprises:
  - (a) culturing the host cell of Claim 7 under the expression conditions;
  - (b) isolating RL5 protein from the culture.
9. An antibody specifically bound with the RL5 polypeptide of Claim 1.
10. A method for detecting the presence of RL5 protein in a sample comprising contacting the
- 30       sample with an antibody specifically against RL5 protein, and observing the formation of antibody complex which indicates the presence of RL5 protein in the sample.